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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666.596

09/18/2003

Jerry Joe Langin-Hooper

8537

26667 7590 03/01/2007  
LINDA FLEWELLEN GOULD  
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EXAMINER

KLIMACH, PAULA W

ART UNIT

PAPER NUMBER

2135

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,596	<b>Applicant(s)</b> LANGIN-HOOPER ET AL.	
	<b>Examiner</b> Paula W. Klimach	<b>Art Unit</b> 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/16; 09/18</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 1-12** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-12 are directed to generating an idem-random number. The examiner asserts that the collection of information does not fall within the statutory classes listed in 35 USC 101. Thus, while the claimed invention is labeled a method and apparatus, it is in fact describing nothing more than the manipulation of basic mathematical constructs. Claims 1-12 are rejected as being directed to subject matter courts have found to be outside the four statutory categories of invention (See MPEP 2106).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over the book by Menezes (“Handbook of Applied Cryptography”).

*In reference to claims 1, 6, and 11* Menezes teaches software based random number generators that identifies a mathematical relationship to be applied to said initial number and said subsequent numbers (section 5.3 page 173 and part ii section 5.2 page 172); applying said mathematical relationship to said initial number and said subsequent number to generate an idem-random number (section 5.3 page 173).

Menezes teaches further methods for finding prime number that include establishing an initial prime number; establishing a subsequent prime number identification condition; determining a first subsequent prime number satisfying the subsequent prime number identification condition applied to the initial prime number (section 4.4.1 pages 145-146).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the prime number that is generated in Menezes (section 4.4.1 pages 145-146) and to apply the mathematical relationship (section 5.3) to the prime number. One of ordinary skill in the art would have been motivated to do this because the mathematical relationship of Menezes is a one-way function and Menezes teaches that by selecting a prime number for the values of  $p$  and  $q$  make the one-way function reverse of the function more difficult (Menezes Example 1.15 page 9 and section 5.14 page 174).

*In reference to claims 2, 7, and 12*, are rejected as in claim 1 above. However, in reference to determining at least one further subsequent prime number identification condition applied to a previously determined subsequent prime number, Menezes discloses combining the trial division stage and then the Miller-Rabin test (section 4.4.1). An in further

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reference to utilizing the mathematical relationship on a first subset of numbers selected from said set of numbers to generate a first random number, Menezes teaches using many sources and then sampling the sources (part ii of section 5.2 page 172).

*In reference to claims 3 and 8*, wherein said steps d through g are repeated to generate a desired number of idem-random numbers. Menezes teaches using many sources and then sampling the sources (part ii of section 5.2 page 172).

*In reference to claims 4 and 9* Menezes discloses establishing desired distribution characteristics; determining a distribution operation to be applied to said idem-random (random number) numbers to create said desired distribution; and applying said distribution operation to said idem-random numbers to generate specifically distributed idem-random numbers (random number; pages 176-177).

*In reference to claims 5 and 10* Menezes discloses establishing desired distribution characteristics; determining a distribution operation to be applied to said idem-random numbers (random number) to create said desired distribution; and applying said distribution operation to said idem-random numbers to generate specifically distributed idem-random numbers (pages 176-177).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paula W. Klimach whose telephone number is (571) 272-3854. The examiner can normally be reached on Mon to Thr 9:30 a.m to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PWK  
Friday, February 02, 2007



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